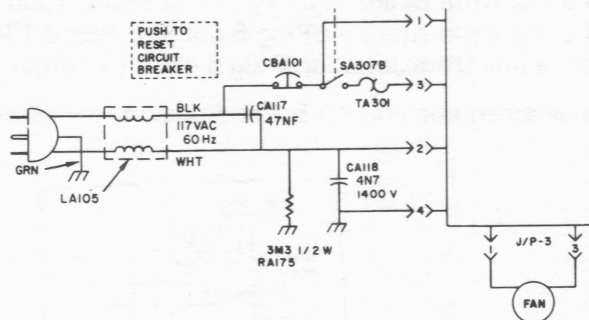


ADVENT
VIDEOBEAM 1000A
SERVICE MANUAL CORRECTION SHEETS
(**FOR REPRINTED MANUAL OF 3/17/77)
(*FOR REPRINTED MANUAL OF 1/1/78)
(No Asterisk – Correction No. 1 After 1/1/78)

Please make the following changes to your service manual:

Page	Correction
ii	**Change phone number to (617) 661-9500, ext. 430.
xi	**The Section 8 page numbers should read: 8-1, 8-1, 8-2, 8-6, 8-7, 8-7, 8-8.
1-4	**Second Line: "(See Figure 1-3)"
1-6	**Video Input – "1 volt peak to peak, sync negative,"
2-4	**Fig. 6 captions: Top figure – "Screw <u>out</u> left rear foot." – Bottom Figure – "Screw <u>out</u> right rear foot."
2-5	**Add page title: "TUNING PROCEDURE"
4-7	**4.12–2. "Belly Pan (9, Figure 4-3)." 4.12–5. "(4, 8, 13, 15, Figure 4-5)"
5-1	Change schematic area on 5-1 and pocket schematic as follows: Date effective 1/24/77.



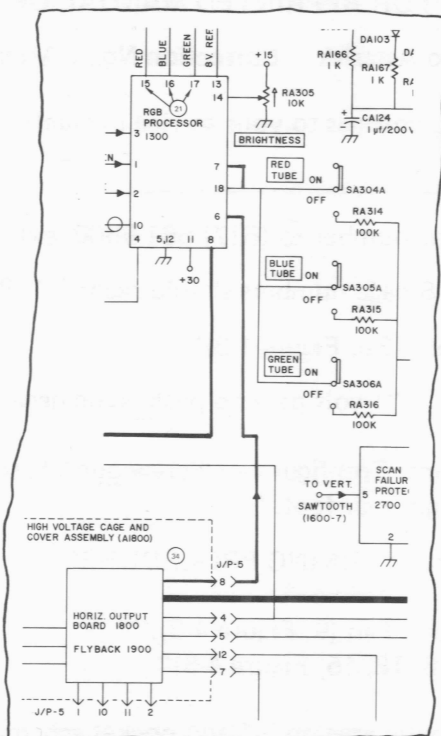
5-1 Add to parts:

No.	Advent Part No.	Description
* * CA126	60-613-042	10 μ f/35V
* LA105	60-123-122	Dual Line Choke
* AC Power Line Cord	40-693-043	15', 18 gauge - 3 wire, molded
* 3 wire SJT		3 prong plug
* Tuning Lamps	60-733-008	6V, 50mA

Change the following parts to:

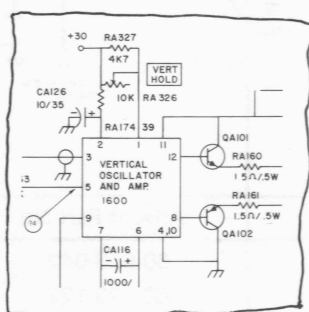
No.	Advent Part No.	Description
* CA117	60-632-332	47NF, 125 VAC, 20%
* CA118	60-632-283	4N7, 1.4 KV, Z5u, 150 VAC Cer. Disc.
* Fan	40-119-002	110V, 60 Hz

- 5-1 ** Waveform 24 refers to board 1600 pin 5, not pin 2.
- 5-1 ** Change schematic area on 5-1 and pocket schematic as follows:



Add a line from Board 1300 Pin 18 to Board 1300 Pin 7.
 Add a line from Board 1700 Pin 11 to Board 1300 Pin 8.
 Add a line from Junction/Plug 5 pin 8 to Board 1300 Pin 6.
 Delete a line from Junction/Plug 5 pin 8 to Center Tap of SA306A.

- 5-1 ** Change schematic area on 5-1 and pocket schematic as follows:



Add CA126 10 μ f/35V electrolytic with the following connections:
 Positive side (+) connected to Board 1600 Pin 2
 Negative side (-) connected to chassis ground.

Add RA174 39 Ω 1/4W 10% with the following connections:
 One end connected to Board 1600 Pin 2
 Other end connected to the 30V supply placing RA174 in series with the 30V supply.

5-2

** Add to INDEX TO P.C. BOARDS AND SUBASSEMBLIES

Reference No.	Name	Advent Part No.
2800	-15V Regulator Board	10-990-442

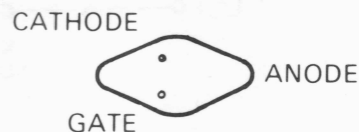
5-2F

* Add the following part numbers shown by arrows →)

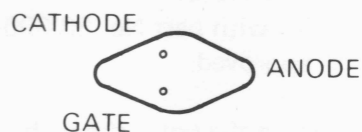
BASING DIAGRAMS

BOTTOM VIEW

60-663-024 RCA40640
→ S3705M



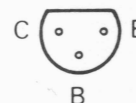
60-663-025 RCA40641
→ S3706M
→ 66793



60-663-034 MOTOROLA MCR103



60-673-006 TIS 97
→ T15 T 6539
→ TIC 609



5-3

** The jumper connecting pins 4 and 6 should be deleted on the +15V regulator.

5-3A

Change power supply chassis parts list as follows:

No.	Advent Part No.	Description
* *Q1	60-673-020	TIP42A
* *T1	80-000-070	Transformer
*T1	80-000-111	110V/60 Hz (UL) Power Transformer
*T2	80-000-112	110V/60 Hz (UL) Filament Transformer

5-4

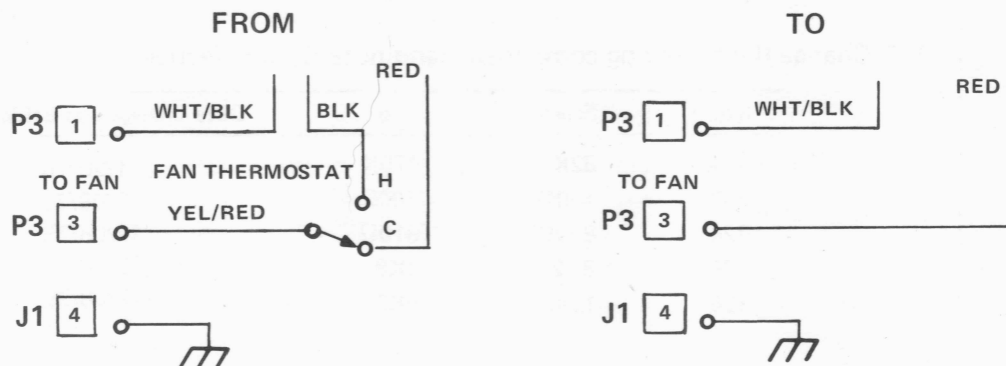
and

5-4A

Delete the following component and note date effective:

Fan Thermostat; effective 2 months after start of 1000A production.

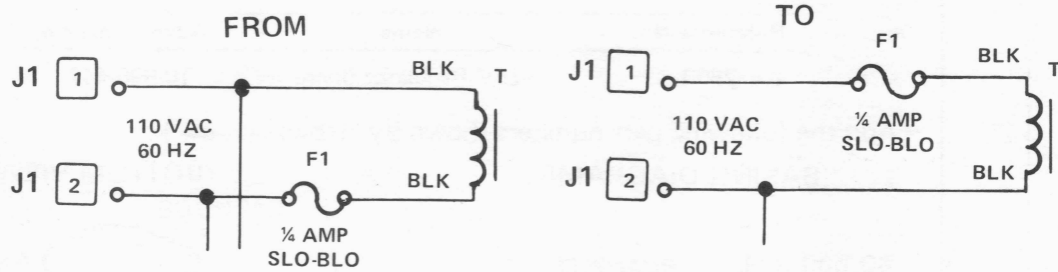
Change the following lines on the schematic drawing as shown:



5-4
and
5-4A

Change the position of the following component on schematic as shown and note date effective.

Fuse, F1, ¼AMP.-slow blow. Date effective 2/27/78.



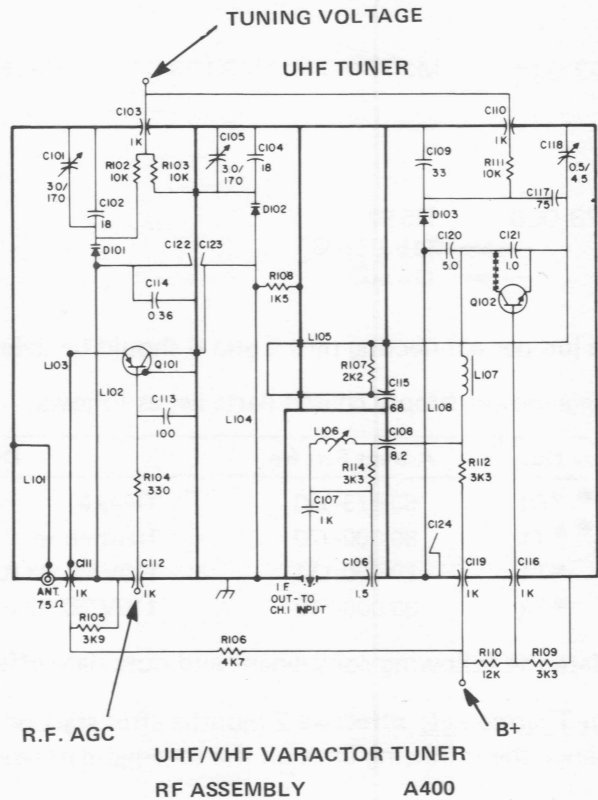
5-4A
Only

Add Note:

T1 with part No. 80-000-070 is schematically the same but is not (UL) approved.

5-6

Add the notes shown by arrows:



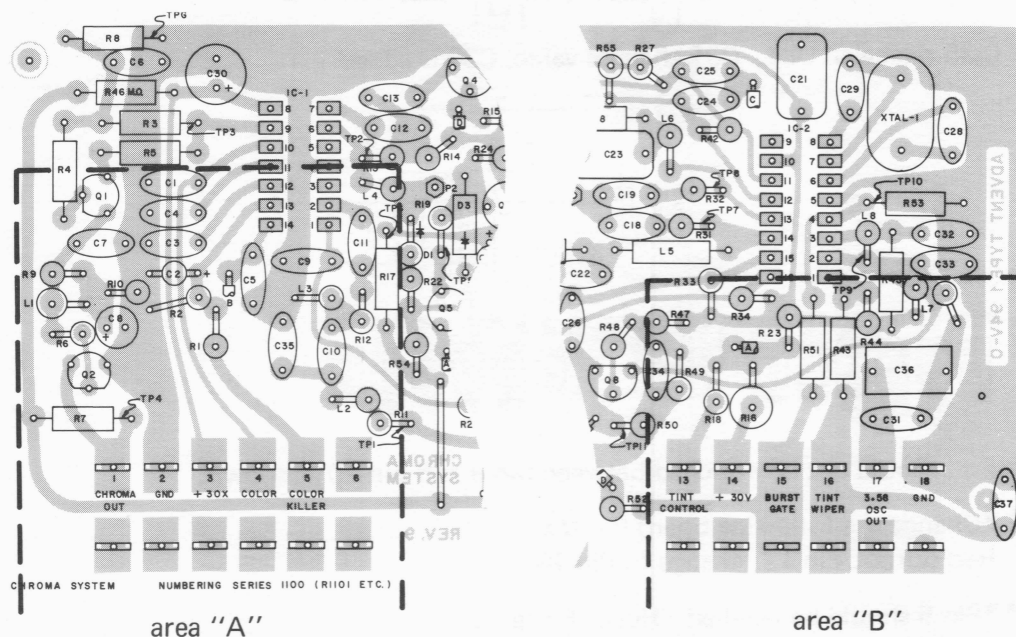
5-8

** Change the following components and note Date Effective

No.	From	To	Date Change was Effective
R14	82K	470K	1/20/76
R17	180Ω	330Ω	12/08/75
R24	820Ω	910Ω	12/08/75
R25	8K2	6K8	12/08/75
R26	13K	6K8	12/08/75

5-19

****New board assembly areas as shown:**



Changes in area "A" are as follows:
10K deleted. C5 and C9 relocated to component side of board.

Changes in area "B" are as follows:
C35 relabeled C37. C31 changes value. C36 is added.

5-19

****Add C-36 and Change C-31 to the Chroma System Board**

Assembly parts list as follows:

No.	Advent Part No.	Description
**C-36	60-629-044	2-15 pf, Variable Trimmer Cap.
**C-31	60-632-125	18 pf, 50V, NPO

5-19

*** Change the chroma system board assembly parts list as follows.**

No.	Advent Part No.	Description
C7	60-632-013	180 pf Z5P Cer. Disc

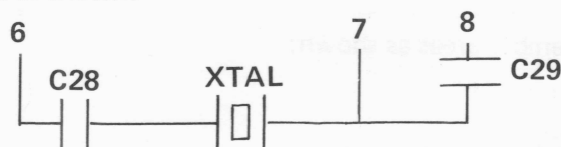
5-20

Change the following components and note Date Effective:

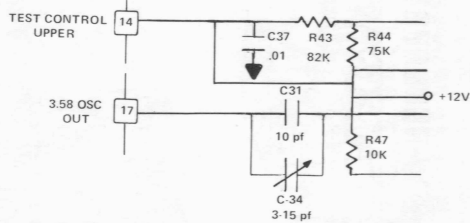
No.	From	To	Date Change was Effective
* R5	330Ω	180Ω	2/9/77
* R9	1K5	2K2	2/9/77
* C7	270pf	180pf	2/9/77
* L1	39μh	56μh	2/9/77

5-20 ** Change schematic area as shown:

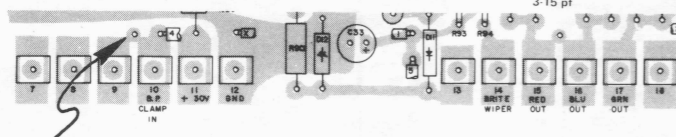
IC2:



5-20 ** C-35 relabeled C37. C31 changes value, C36 is added.



5-23



* Foil should not be attached between pin 9 and pin 10 as shown.

* 5-26

** Change the following board Pin No.

Red output/Pin 12: change to Pin 16

5-27

** Pin 5 should be labelled "Horiz. Pulse"

5-27

** Change R21 from 820Ω to 470Ω

5-28

Change the following components and note Date Effective

No.	From	To	Date Change was Effective
*R11	3K9	5K1	11/12/75
*R21	15K	12K	11/12/75

5-29

** Change as necessary on overlay pg. 5-29 and

5-29A

schematic pg. 5-29A the following:

** Replace R32 with the new component C21, 0.1 μf 100V, 10% Mylar

** Change R11 from 1K2 to 3K9

** Change R19 from 6M8 to 3M3 ½W

** R14 and R15 should change positions on schematic for proper sequence on board.

* Change R5 from 2K7 to 1K8

5-31B

Change Horizontal Output Board Assembly 1800 Parts List as follows:

No.	Advent Part No.	Description
* C4	60-632-276	.033 MFD 600V 10%, paper-mylar

5-32

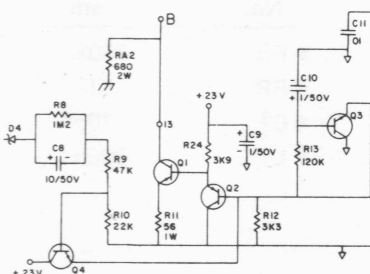
** Change the following components as follows:

** Delete diode D5

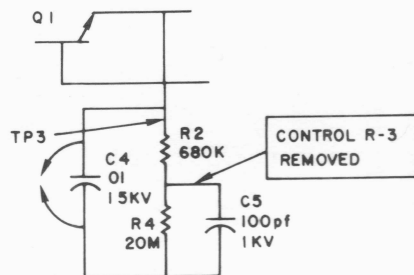
** Add Transistor Q4 as shown

* R21 from 82K to 75K Effective 11/12/75

* C4 from 0.39 to 0.33 Effective 3/17/76



5-34 *Some previous board may be as follows:



5-36 * *The capacitor from pins 3 and 4 to ground is a 50 MFD/12V.
 * The capacitors from pins 6 and 4 to ground are now on the board
 * Effective 12/24/75

5-39 * *Pin 4 should be labelled "Hor. Pulse In"

* Change the following component and note date effective

No.	From	To	Date Change was Effective
R21	22K	10K	1/17/74

Add the following component.

* C10, 0.047 μ f between pin 4 and R21 Effective 1/17/74

5-40 Pin 3 is connected directly to 1700 pin 7 and external components shown should be deleted.

5-51 * *Upper trace is waveform 5F (waveform 24).

6-15 * *Fifth line up: "with P2-J2 open,"

6-35 * *"Keystone Amplifiers" refers to the Dynamic Convergence Amplifiers — 2600

7-4 * *1700: R15-Horizontal hold limit. Adjust for zero volts, DC, plus or minus
 * *.1V, at the junction of R6 and R7.

7-4 * *1700: "L2-Horizontal oscillator coil."

7-5 * *G2 Doubler and Regulator is board 2000.

8-2 * *III.-8. Waveform number 14

8-3 * *IV.-1 "2600, Pin 9."

* *IV.-13. "2000, R3."

* *IV.-16. "20-25 VDC"

8-6 * *+15V: Board 100, "Pins 4 and 6"

* *+23V: Audio Power Board "(700)"

* *+30V: Board 1000, Pin 2 only.

* *-9.5V: Focus Regulator Board (2300), pin 4"

9-1 Add note: See page 5-1 for parts list

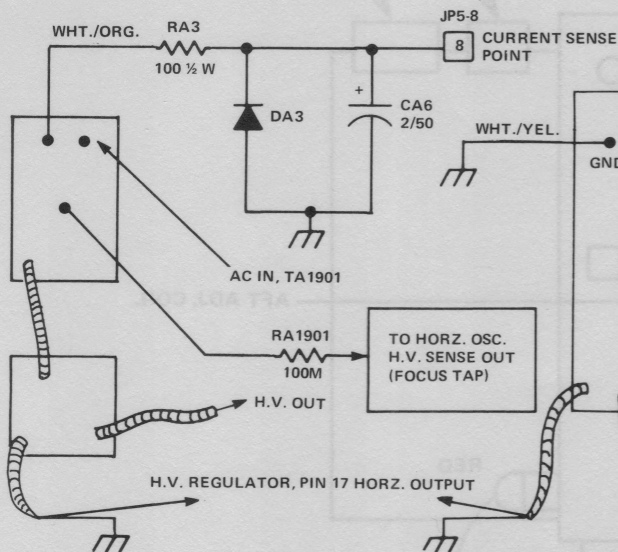
9-5 Change Power Control Bracket Assembly A3000 parts list as follows.

No.	Advent Part No.	Description
T1	80-000-115	100V/60Hz. (UL) Transformer

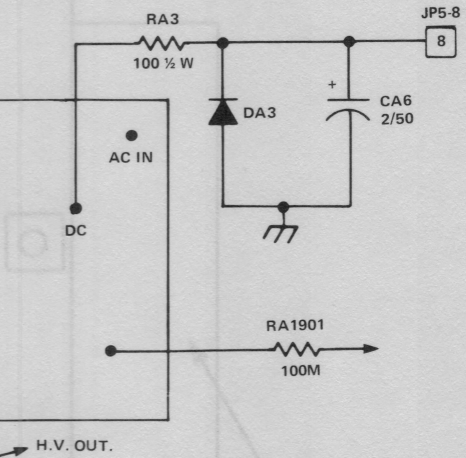
SERVICE BULLETIN NO. 1

Tripler-High Voltage Bleeder Assemblies

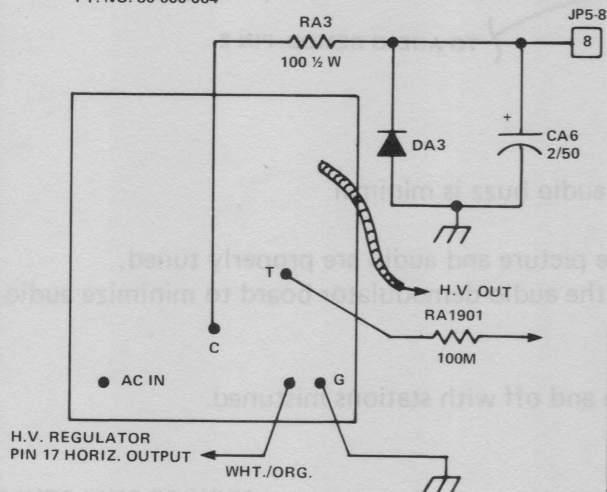
PROD. DATE STARTED - FALL 1974
MFG. - ADVENT
PT. NO. 10-990-155



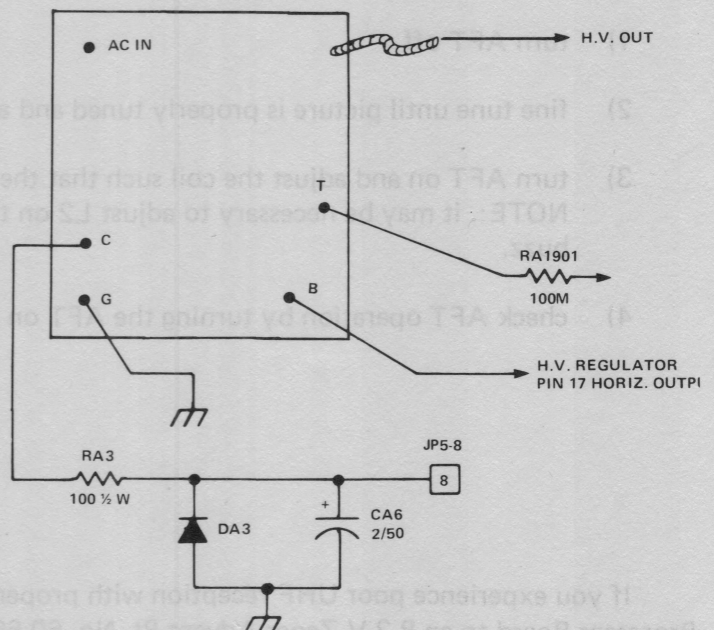
PROD. DATE STARTED - SPRING 1975
MFG. - ERIE
PT. NO. 80-000-064

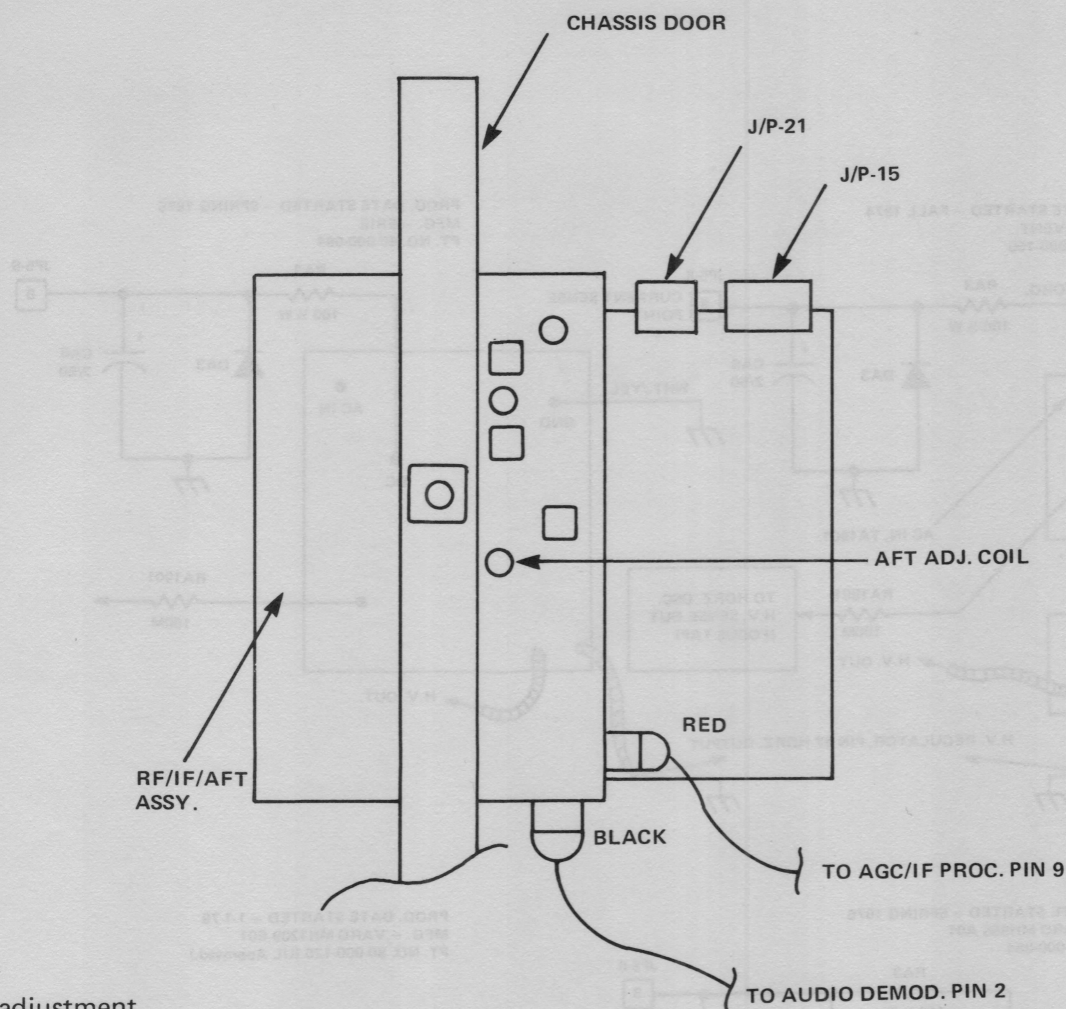


PROD. DATE STARTED - SPRING 1976
MFG. - VARO MH965 A01
PT. NO. 80-000-064



PROD. DATE STARTED - 1-1-78
MFG. - VARO MH1209 E01
PT. NO. 80-000-120 (UL Approved.)





AFT adjustment

- 1) turn AFT off
- 2) fine tune until picture is properly tuned and audio buzz is minimal
- 3) turn AFT on and adjust the coil such that the picture and audio are properly tuned.
NOTE: it may be necessary to adjust L2 on the audio demodulator board to minimize audio buzz.
- 4) check AFT operation by turning the AFT on and off with stations mistuned.

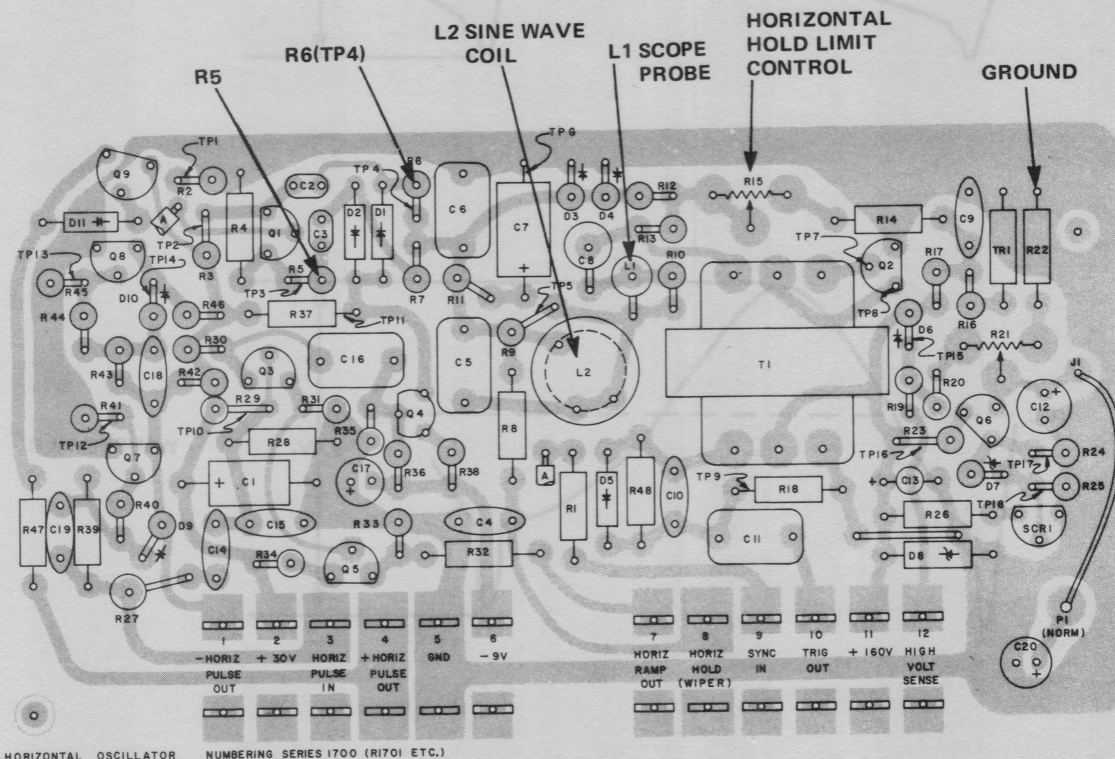
If you experience poor UHF reception with proper signal level change zener diode D5 on the AGC/IF Processor Board to an 8.2 V Zener Advent Pt. No. 60-663-017 (1N5237A).

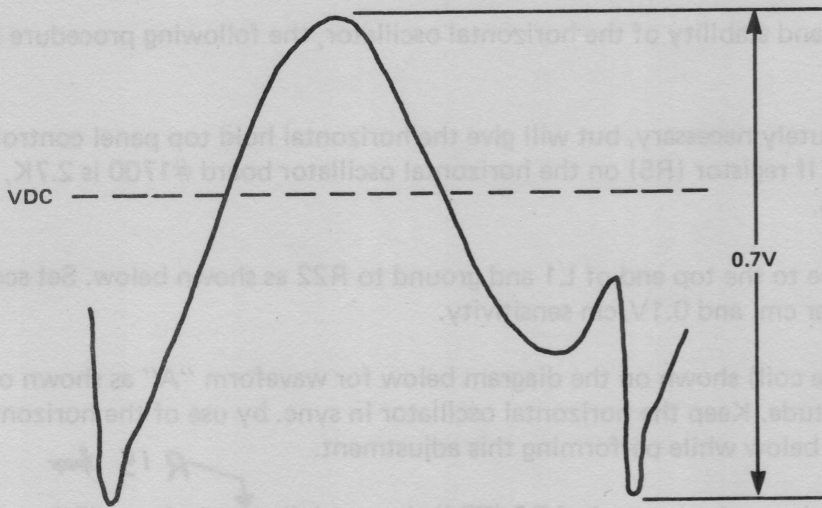
SERVICE BULLETIN NO. 4
Horizontal Oscillator Adjustment

For maximum reliability and stability of the horizontal oscillator, the following procedure is required.

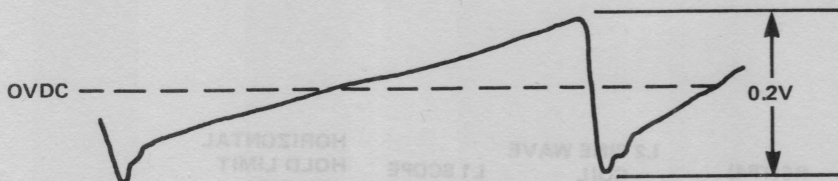
1. Step #1 is not absolutely necessary, but will give the horizontal hold top panel control symmetry in frequency range. If resistor (R5) on the horizontal oscillator board #1700 is 2.7K, replace it with a 1K8 ¼W 10%.
2. Attach a scope probe to the top end of L1 and ground to R22 as shown below. Set scope sweep to 10u sec. per cm. and 0.1V/cm sensitivity.
3. Adjust L2 (sine wave coil) shown on the diagram below for waveform "A" as shown on page 3 with proper amplitude. Keep the horizontal oscillator in sync. by use of the horizontal hold limit control shown below while performing this adjustment.
4. Attach the scope probe to the top end of R6 (TP4) shown. Adjust waveform "B," as shown to 0 VDC \pm 0.1 V by DC coupling the scope input.

Waveform "C" is shown as the most unstable and incorrect waveform. To go from waveform "C" to waveform "A" you would have to rotate the L2 slug in a clockwise direction.

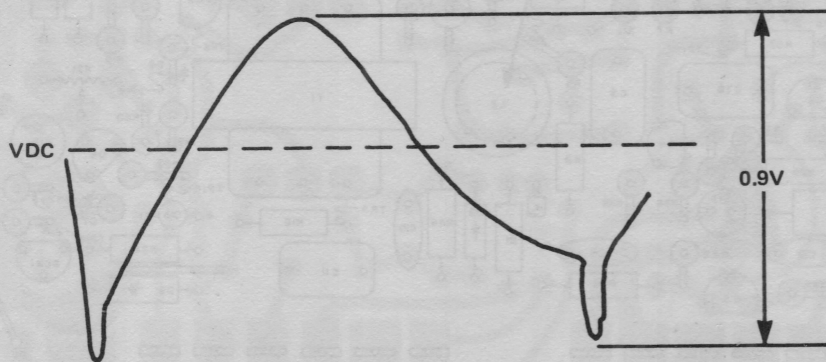




WAVEFORM A



WAVEFORM B



WAVEFORM C

SERVICE BULLETIN NO. 5

Increased Chroma Level

Beginning with S/N GO8760 (1000A) and S/N GO1620 (1000A RC), we have doubled the chroma level. Older sets and/or Chroma (1100) boards may be modified as follows:

1. Change R5 (330 ohm, $\frac{1}{4}W$, 10%) to 180 ohm, $\frac{1}{4}W$, 10%
2. Change R9 (1.5k ohm $\frac{1}{2}W$, 10%) to 2.2k ohm, $\frac{1}{4}W$, 10%
3. Change L1 (39uH) to 56uH new P/N 60-623-036; wilco #MU560
4. Change C7 (270pf) to 180pf ceramic disc or silver MICA

The 56uH coil is available from Advent, all other parts should be obtained locally.

Align according to the service manual except;

Chroma Alignment is changed as follows:

Adjust the ACC pot (R36) on the Chroma board (1100) for 600mV P-P with color + tint controls midrange.

NTSC Decoder Alignment is changed as follows:

Midrange tint control, set color control for 300mV P-P at Decoder Chroma Input (Pin 3).

SERVICE BULLETIN NO. 6

Arbitrary Overvoltage Protection Shut Down

If you experience this problem; change R19 resistor value and reset the overvoltage trip point. If this does not correct the problem, it is suggested that RA 1901 (100 Meg Ohm, 10 Kv) in the High Voltage Cage and Cover Assembly be replaced. This resistor has drifted in value in some instances.

Our recent investigation into the problem of nuisance tripping of high voltage crowbar circuits in all models (710, 750 & 1000A) has been completed. We have confirmed that in the 750 & 710, R458 (100 meg 10% Resistor) has, in some cases, a tendency to drift resulting in no picture. The same part is also used in the 1000A and has also exhibited the same problems.

If you should encounter this problem, the following procedure is recommended:

1. Get a supply of known good resistors from your local parts house or Advent.
 - a. Hook up rudimentary antenna so set can be "locked in" to a station.
 - b. Plug set in via a metered variac.
 - c. Short out R457 and R459 with clip leads.
 - d. With no beam current (brightness and contrast full ccw) and the set tuned to a station, turn the variac up until the crowbar fires. The line voltage at trip must be at least 110 volts. If not, the set is to be rejected, the 100 meg resistor and crowbar adjust control replaced, the crowbar readjusted, and the set is to be "burned in" again.
2. Where possible, the "drift test" as outlined above can be performed before delivery to minimize service calls. When a set does trip in the field, the 100 meg resistor and crowbar adjustment control are to be replaced and the crowbar readjusted. The service man should return the resistor to Advent.
3. The crowbar circuitry for the 1000A has been redesigned for improved stability and is in the process of being incorporated onto the horizontal oscillator board. The new board will be implemented as soon as possible.

LightGuide tubes with anode lead damage that cannot be repaired with high voltage tape can be repaired by replacing the old anode lead and cup. You will need a sharp knife or single edge razor blade and a tube of clear silicon rubber sealer. Silicon rubber sealer is available at electronic supply houses or hardware stores; ask for General Electric R.T.V. or Devcon Seal-it.

1. Removing the old lead.

Cut between the cup and the glass, and peel the cup out of the way. Pinch the spring connector on the anode lead with needle-nose pliers and pull it out at the same time.

2. Surface preparation.

While it is not necessary to remove all the old red rubber potting compound from the glass, any loose pieces should be removed and any left on the tube must permit the new cup to fit snugly to the glass. (Fig. 1) Clean all the rubber from the receptacle hole on the tube.

3. Installing the new lead.

Compress the spring connector and insert into receptacle. Fill the receptacle with clear silicon rubber sealer. (Fig. 2) For the silicon rubber to cure completely it must be exposed to air. Don't install the cup until the silicon rubber at the tube connection is firm to the touch (approximately 2-3 hours). Apply 1/8" — 1/4" bead of silicon rubber to the inner edge of the cup (Fig. 3) and slide the cup until it's firmly seated to the tube. Seal the area where the anode lead passes through the cup with silicon rubber. (Fig. 4) Let the silicon rubber cure for 24 hours before operating the tube.



Fig. 1

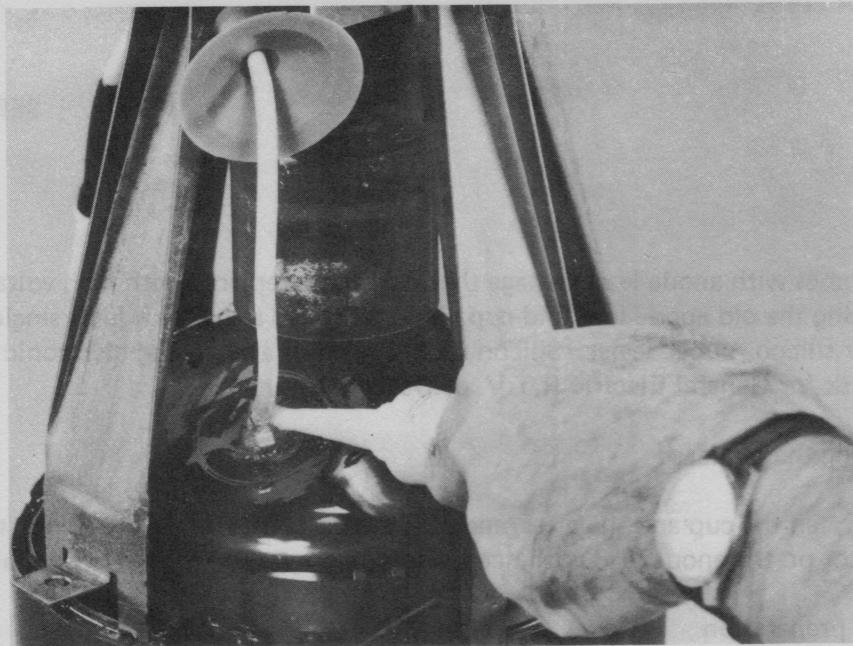


Fig. 2



Fig. 3



Fig. 4

**RECOMMENDED
1000A PARTS KIT**

Qty.	Advent Part Number	Description
10	50-714-009	Trim Pot 25K
5	50-714-018	Trim Pot 5K
5	50-714-032	Trim Pot 1K
10	50-714-040	Trim Pot 250K
6	60-632-071	Capacitor, .75 pF, 1KV, Spark Gap
6	60-632-153	Capacitor, .01, 1KV, Spark Gap
3	60-663-002	Diode, 1N191
1	60-663-003	Diode, 1N914
5	60-663-010	Diode, 1N4002
2	60-663-015	Diode, D2600
3	60-663-017	Diode, 1N4004
1	60-663-048	Diode, 1N5252
1	60-663-020	Diode, 1N5239
1	60-663-021	Diode, 1N5256
1	60-663-023	Diode, 1N5233
2	60-663-026	Diode, 1N5400
2	60-663-027	Diode, 1N4006
3	60-663-028	Diode, 1N4003
1	60-663-031	Diode, 1N5259
1	60-663-033	Diode, 1N295
2	60-663-035	Diode, 1N4007
2	60-663-037	Diode, D2103SF
2	60-663-038	Diode, D2103S
2	60-663-039	Diode, 1N5236
1	60-663-043	Diode, 1N5230
10	60-673-006	Transistor, TIS97
1	60-673-008	Transistor, TIP 29
1	60-673-014	Transistor, 2N4852
1	60-673-015	Transistor, MPS U06
1	60-673-016	Transistor, MPS U56
1	60-673-018	Transistor, MPS 6544
6	60-673-019	Transistor, TIP 41A
6	60-673-020	Transistor, TIP 42A
5	60-673-021	Transistor, MPS U10
5	60-673-022	Transistor, MPS U60
3	60-673-023	Transistor, MPS U02
1	60-673-027	Transistor, MPS A92
5	60-673-028	Transistor, MPS U52
3	60-673-030	Transistor, TIS 74
1	60-673-031	Transistor, MPS A43
2	60-673-033	Transistor, MJE 2955
6	60-663-024	SCR, S3705M
6	60-663-025	SCR, S3706M
2	60-663-034	SCR, MCR 103
2	60-677-008	IC, MC1370P
2	60-677-009	IC, MC1371P
2	60-677-012	IC, LM723CN
2	60-677-013	IC, LM2111
2	60-677-014	IC, MC1329P
1	60-677-020	IC, SN7493
1	60-677-021	IC, MFC6040

**RECOMMENDED
1000 A BOARD KIT**

Qty.	Advent Part Number	Description
1	10-990-150	Audio Power Amplifier Board
1	10-990-151	Pincushion Corrector
1	10-990-156	Waveform Generator
1	10-990-160	Scan Failure Protection
1	10-990-161	External Video Amplifier (Rev. 3)
1	10-990-164	15/30V Regulator
1	10-990-226	G-2 Doubler & Regulator
1	10-990-267	RGB Processor
1	10-990-269	NTSC Decoder
1	10-990-271	Tone Control
1	10-990-273	Vertical Oscillator & Amplifier
1	10-990-275	Horizontal Oscillator
1	10-990-277	Luminance Processor
1	10-990-279	Video Output
1	10-990-281	Chroma System
1	10-990-283	Horizontal Output (Rev. 4)
1	10-990-285	Dynamic Convergence Amp
1	10-990-308	Cross Hatch Generator
1	10-990-343	Comb Filter
1	10-990-413	Focus Regulator (Rev. 7)
1	10-990-417	Audio Demodulator (Rev. 1)
1	10-990-427	7.5V Reference
1	10-990-498	Bow/Wob Generator
1		Extender Board Kit

Other Assemblies and Boards not included in the Board Kit:

10-990-296	Tuning Control Assembly	10-990-352	RGB Processor (Remote Control)
10-990-306	Power Supply Assembly	10-990-353	Remote Control Board (R/C)
10-990-312	High Voltage Cage & Cover Assembly	10-990-354	Power Supply Assembly (R/C)
10-990-323	AGC/IF Processor	10-990-355	Power Control Brkt. Assy. (R/C)
10-990-332	RF/IF/AFT Assembly	10-990-361	Remote Control Box Assembly (R/C)